

## The Effect of Self-Efficacy and Motivation on the Effectiveness of the Lecturer's Performance

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**Abstract:** The purpose of this study was to determine how much influence self-efficacy and motivation have on the performance of Lecturers' in the College of Indonesian Aviation or Sekolah Tinggi Penerbangan Indonesia (STPI). The lecturers' self-efficacy decreases if it is not related to the disruptive era - industrial revolution 4.0. In applying Tridharma Perguruan Tinggi, lecturers have three main functions of education, research and community service. This research used an empirical approach with quantitative methods. Data collection was done by sampling with questionnaires and observation techniques. Through descriptive statistical analysis of the results of the variables Self-Efficacy (X1) and Motivation (X2) obtained from questionnaires for 30 respondents using the percentage of answers to 35 indicators. The same method in motivational variable data is for 12 indicators. Moreover, with the same method, the result data of lecturer performance variable (Y) towards 26 question indicators stated that lecturer performance at STPI is already good or high, it means that the correlation between two positive variables is solemnly strong. The result of this study indicated that self-efficacy and motivation are closely and strongly related to the effectiveness of the performance of STPI lecturers in the application of Higher Education Tridharma by STPI lecturers.

**Keywords:** Self-efficacy, Motivation, Lecturers and Performance.

**Abstrak:** Tujuan penelitian ini untuk mengetahui seberapa besar pengaruh efikasi diri dan Motivasi terhadap kinerja dosen Sekolah Tinggi Penerbangan Indonesia (STPI). Efikasi diri dosen menurun jika tidak berdamai dengan era disruptif – revolusi industri 4.0. Dosen dalam penerapan Tridharma Perguruan Tinggi memiliki tiga fungsi utama yaitu: pendidikan, penelitian dan pengabdian kepada masyarakat. Penelitian menggunakan pendekatan empiris dengan metode kuantitatif. Pengumpulan data dilakukan secara sampling dengan tehnik angket/kuesioner dan observasi. Melalui analisis statistic deskriptif data hasil variabel Efikasi Diri (X1) dan Motivasi (X2) yang diperoleh melalui kuesioner terhadap 30 responden dengan menggunakan metode presentase jawaban terhadap 35 indikator. Metode yang sama data hasil variabel motivasi terhadap 12 indikator. Demikian pula dengan metode yang sama data hasil variabel kinerja dosen (Y) terhadap 26 indikator pertanyaan hasilnya bahwa kinerja dosen pada STPI sudah baik/tinggi, artinya korelasi antara dua variable positif dan sangat kuat. Hasil penelitian ini menunjukkan bahwa efikasi diri dan motivasi berhubungan erat dan kuat sekali dengan efektivitas kinerja dosen STPI dalam penerapan Tridharma Perguruan Tinggi oleh dosen STPI.

**Keyword:** Efikasi diri, Motivasi, Dosen dan Kinerja.

## INTRODUCTION

Self-efficacy plays an important role in everyday life. Self-efficacy is closely related to self-concept, self-esteem, and locus of control (I Made, 2012); (Saraswati *et al.*, 2017). A person can use the potential optimally if his/her efficacy supports it. Self-efficacy also has a large role in work effectiveness. Confidence relates to the encouragement or motivation of lecturers to be more confident and have confidence in their abilities.

While motivation can be revealed as the perseverance of an individual is trying to achieve goals and obtain better (Ahmad *et al.*, 2010). Motivation is the factors that exist in a person who moves and directs the behavior or encouragement that causes someone to do something or do something to satisfy individual needs to achieve certain goals. Motivation in a person can affect the life of human behavior and that individual behavior is essentially goal-oriented, to be able to excel in working with productivity.

Therefore self-efficacy and work motivation are needed and it is significantly important for lecturers to carry out tasks with different situations from traditionally work systems, teaching and learning activities to be based on cyber-physical systems. The phenomenon that occurs today is the self-efficacy and work motivation of college lecturers may decrease if it is not related to the Disruptive Era - Industrial Revolution 4.0. Students can be or even be smarter and able to operate information technology based on computerized and cyber-physical systems compared to educators or lecturers who should be better. As Jack Ma (founder of Alibaba) put it at the 2018 World Economic Forum, that today's students who, on average, are millennials are always-connected, social-savvy, and enjoy app-happy), depend on smartphones (smartphone-dependent).

Based on the national regulation and rules of education system it is stated that the lecturer is a professional educator and scientist with the main task of transforming developing and disseminating science, technology, and art through education, research and community service (Regulation and Rules No. 14/2013 on Teachers and Lecturers), so lecturers must be able to follow the development of the industrial revolution. It is understood that the industrial revolution 4.0 is the fourth generation of the industrial revolution. The industrial revolution that occurred so far is starting from the revolution based on the steam engine (IR 1.0), then towards the revolution based on electricity (IR 2.0), further computerized and automation based revolution (IR 3.0), to the industrial revolution 4.0 which based on cyber-physical system (IR 4.0).

One effect of the occurrence of the industrial revolution 4.0 is the emergence of disruptive in all lines of life, including life in the field of education. According to (Rhenald, 2017) disruptive is an innovation, such as the process of replacing old systems in radically new ways. Or in other languages, it can be stated that the industrial revolution 4.0 is the 4th generation representative of the radical social revolutionary changes in society.

In the context of the big question, is the development of the educational paradigm 4.0 a threat or opportunity for lecturers, especially the older generation (Y generation) lecturers? Education paradigm 4.0 is a paradigm in which there is an increase in connectivity, interaction, and boundaries between humans, machines, and other resources that are increasingly converging through information and communication technology. The prominent effect of this era is the speed and acceleration of the rhythm of life which according to (Piliang, 2005) is called the politics of the time (chromo politics), so that renewal in all aspects of life takes place very quickly, is difficult to avoid. Changes that

occur starting from upstream to downstream, and tend to collaborate on three aspects in it, namely human factors as labor, technology or machinery, and big data.

Related to acceleration in various dimensions of life, it turns out to bring great challenges, if not want to be called a threat to the life of the education world. One of the fundamental threats that must be faced by educational actors (read: lecturers) is the effort to master the shift in power and speed from the relational power or territorial (power or place) to the power/ speed relation supported by the power/knowledge relation (power/ knowledge) as Foucault understands.

If the lecturers were not able to follow the acceleration rhythm as described by Foucault, then that would be a threat to the lecturers themselves. However, when they can adapt and articulate the dynamics of the acceleration, this will certainly be an opportunity for them to find and develop various learning strategies that can stimulate students to learn creative and innovative.

This is interesting because in the era of education 4.0 the use of cyber technology in the context is increasing of central learning. Or with other languages, the integration of cyber technology into the learning process, where human power is aligned with the machine to find solutions to solving life's problems, then this process is incredibly possible for innovations in the context of learning.

Again this will be an opportunity for lecturers if they are creative and innovative in adapting to the dynamics of the development of science and technology, especially information technology. For example, when human resources and technology/ machinery are aligned to solve the problems of human life, then certain dimensions cannot be worked on by the machine or technology itself so that it will become vacant.

According to (Andrey and Haryanti, 2017) the dimensions in question are the inculcation of ethical values, courtesy, cultural values, and various values of social wisdom that are owned by local communities can never be done by machines/ technology. Therefore this is where the opportunities for lecturers, especially those who are creative and innovative in packaging a variety of learning strategies will be able to fill these gaps. Another interesting thing, for lecturers who are creative and innovative, by integrating cyber technology into the learning process in the classroom is that it can make itself have the potential to improve the quality of life, both for themselves and for their students. This can be realized, because the ability to utilize technology effectively and efficiently, including in terms of articulating various social lives in society, can increase work productivity, and at the same time reduce transportation and communication costs. To be able to achieve it, naturally the ability to adapt to technological developments, especially computer and internet technology can be demanded to make it easier for humans to deal with various problems of their lives.

Considering the importance of the position, role, main tasks, and functions of lecturers in tertiary institutions, both in public and private educational institutions including the College of Indonesia Aviation or Sekolah Tinggi Penerbangan (STPI) without exception, we need to continue consistently in the implementation of improving self-efficacy and work motivation of lecturers so that the quality of human resources is guaranteed (Tiarto, 2017).

Following the vision and mission of the STPI is a center of excellence of transportation human resources in the field of aviation. To ensure an increase in the quality and accountability of education that can face challenges following the changing demands of

local, national and global life, it is necessary to empower and improve the quality of STPI lecturers in a planned, directed and continuous manner.

However, based on the result of Tiarto's research in 2017 in the Blue Sky Journal Volume 10 Number 2 Page 40-51, ISSN 1979-1534 STPI stated that the Satisfaction Index of cadets towards STPI services showed a value of 71.11 %, which means the quality of STPI services is still below the interests/expectations of cadets of STPI (not yet 100%).

In connection with the description above, this study aims to look at the effect of self-efficacy and work motivation on the effectiveness of lecturer performance in the application of Higher Education Tridharma in Sekolah Tinggi Penerbangan Indonesia.

## THEORETICAL REVIEW

**Self-efficacy.** (Mukrodi, 2018) stated that: self-efficacy as self-perception of how well the self can function in certain situations, related to that oneself can take the expected action. Self-efficacy greatly influences a person's motivation in developing their potential, pursuing performance achievements to be achieved and also influencing self-confidence in socializing in people's lives. The level of self-efficacy of individuals varies from individual to individual. If a lecturer has a high level of efficacy, he or she is always confident in his or her ability to do things, whereas a lecturer with a low level of self-efficacy, will always hesitate and halfway in completing his task.

Self-efficacy is one's evaluation of one's ability or competence to carry out a task, achieve goals, and overcome obstacles (Priyantini, 2013). Self-efficacy in lecturers is influenced by individual observations of the lecturer on something that happens in his or her social environment. Lecturers will further improve their quality if they believe in their potential. Each lecturer must increase his self-efficacy to develop his potential. The more the lecturer believes that the capabilities they have, the easier they will also improve their quality and performance.

**Self-efficacy indicator.** Self-efficacy indicators refer to aspects of self-efficacy namely the level aspect, the strength aspect, and the generality aspect. Researcher (Rustanto, 2016) formulated several self-efficacy indicators such as (1) Efforts to complete work. Individuals believe that they are capable of completing tasks, which is the individual himself who sets the task (target) what must be completed. (2) There are efforts to achieve success. Be confident in motivating yourself to take the actions needed to complete the task. (3) Perseverance in completing work. (4) There is a strong effort from the individual to complete the assigned task by using all available resources. (5) Efforts to change themselves based on experience. Individuals can survive in the face of difficulties and obstacles that arise and can rise from failure.

**Work motivation.** Understanding work motivation is a set of internal and external factors that are a driver of various work-related behaviors. According to (Bandura, 1997) work motivation is understood as a condition or condition that causes workers to work or carry out an activity of their own volition to achieve organizational goals and simultaneously be able to satisfy their needs.

Research conducted by (Karagiannis *et al.*, 2011) also has a relatively similar statement, where motivation is grouped into two namely intrinsic motivation and extrinsic

motivation. Intrinsic work motivation includes feelings to have involved in work (feeling of involvement), leaders help problems faced by employees, the attractiveness of work, promotion or career development, and high appreciation of good work results. While extrinsic motivation includes security guarantees at work, good salary, wise work discipline, good working conditions, and a respectful environment.

**Indicators of Work Motivation.** There are several indicators of work motivation. The power of work motivation to work/ perform directly is reflected in how far he works hard. This effort might produce good performance or vice versa because there are 2 (two) factors that must be true if the effort will be converted into performance. First, the workforce must have the skills needed to do their jobs properly. Without the ability and high effort, it is impossible to produce a good performance. Second is the perception of the workforce concerned about how their efforts can be changed to the best possible performance, it is assumed that the perception is learned from previous experience in the same situation (Mangkunegara, 2012).

According to (Mangkunegara, 2012) dimensions and indicators of work motivation can be grouped as follows: **(1) Internal Motivation:** Responsibility for carrying out tasks; Carry out tasks with clear targets; Have clear and challenging goals; There is feedback on the results of his work; Having a sense of pleasure at work; Always trying to bully others; Prioritized achievement of what he did. **(2) External Motivation:** Always trying to meet the needs of life and work needs; Happy to get praise from what he did; Work by wanting to get incentives; Work with the hope of getting the attention of friends and superiors.

### **Lecturer Work Effectiveness**

**Effectiveness.** In general, the notion of effectiveness is a condition that showed the level of success or achievement of a goal as measured by quality and quantity and time as planned previously. According to (Ravianto, 2014), the notion of effectiveness is how well the work is done, the extent to which people produce outputs as expected. This means that if a job can be completed following good planning in time, cost and quality it can be said to be effective.

The effective word that we use in Indonesia is the equivalent of the English word from the word "effective". The meaning of this word that is successful or something has done successfully. Whereas in the Big Indonesian Dictionary, the word effectiveness has several meanings, its effects, influence, and impression, effective, can bring results (KKBI, 1995) In the Dictionary of Popular Scientific dictionaries, effectiveness is efficiency, effectiveness, supporting objectives.

Meanwhile, according to (Osborne and Ted, 1996), Effectiveness is a measure of the quality of output, how to achieve the expected outcome, Efficiency is a measure of how much it costs for each unit of output. When we measure efficiency, we know how much it will cost us to achieve a certain output. When we measure effectiveness, we know whether our investment is useful.

**Work.** Work is a dynamic and valuable activity, it cannot be separated from physical, psychological and social factors. The value contained in work for individuals with one another is not the same. This value can affect every behavior in the work. According to



(Rustanto, 2016) work is the use of mental and physical processes in achieving some productive goals.

**The performance.** Performance is an Indonesian word from the basic word "work", which translates words from foreign language achievement. Performance in organizations is the answer to the success or failure of organizational goals that have been set. According to (Mangkunegara, 2012) performance (work performance) is the result of the quality and quantity of work achieved by an employee in carrying out their duties following the responsibilities given to him. Performance is the result of the quality and quantity of work that can be achieved by an employee in carrying out tasks with the responsibilities given to him.

According to (Potale and Uhing, 2015) concluded that the meaning of work effectiveness or performance is the quality and quantity of work achieved by someone in carrying out their duties following the responsibilities given to them, Performance comes from the word job performance or actual performance, which means that work performance is the result of quality and quantity of work achieved by an employee in carrying out their functions under the responsibilities given.

According to (Siagian, 2015) "The effectiveness of work is as one of the abilities or conditions of success of a job carried out by humans to provide the expected use". Furthermore, (Siagian, 2015) revealed that "Work effectiveness is the completion of work on time". The success of the company to achieve its goals starts with the success of each employee concerned. In other words, the effectiveness of a company can be achieved if each employee can precisely achieve the desired goals. A job is said to be effective if it can achieve the objectives as planned by using all the resources that have been planned as well. Work effectiveness is one of the objectives of every job implementation. Work effectiveness can be achieved if the implementation of work under the conditions required by the job. And to understand work effectiveness, it is necessary to first understand the meaning of work effectiveness.

Definition of Effectiveness according to (Rustanto, 2016) is the word that we use in Indonesia is the equivalent of the English word from the word "effective". The meaning of this word that is successful or something has done successfully. Whereas in the Big Indonesian Dictionary, the word effectiveness has several meanings, namely, its effects, influence, and impression, effective, can bring result (KKBI, 1995) In the Dictionary of Popular Scientific dictionaries, effectiveness is efficiency, effectiveness, supporting objectives.

Meanwhile, according to (Osborne and Ted, 1996), Effectiveness is a measure of the quality of output, how to achieve the expected outcomes. Efficiency is a measure of how much each unit of output costs. When we measure efficiency, we know how much it will cost us to achieve a certain output. When we measure effectiveness, we know whether our investment is useful. In conjunction with the performance of lecturers at the College of Indonesian Aviation Curug, Tangerang, the extent of the effect of self-efficacy and work motivation on work effectiveness on lecturers.

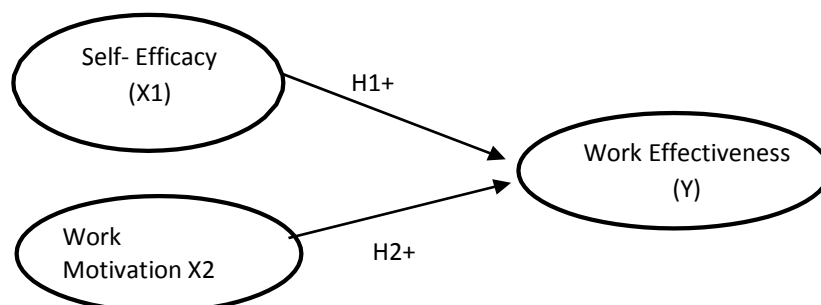
**Lecturer Performance Indicator.** (1) Pedagogical Competence. Pedagogical competence is one type of competence that needs to be mastered by lecturers. Pedagogical competence is the ability of lecturers to manage student participants. Pedagogic competencies are unique

competencies that will differentiate lecturers from other professions and will determine the level of success of the process and learning outcomes. (2) Professional Competence. Professional competence is competence or ability related to the completion of lecturer assignments. This competency is a competency that is very important because it is directly related to the performance displayed. Therefore the level of professionalism of a lecturer can be seen from this competency. (3) Personality Competence. The function of lecturer personality competence is to provide guidance and role models, jointly develop creativity and generate learning motives and encouragement to progress to students. (4) social competence. Social competence is the ability of lecturers to communicate and interact effectively with the school environment, and the surrounding community.

This study examines (1) self-efficacy (X1) and (2) work motivation (X2) on the effectiveness of lecturer work (Y), or only two independent/independent variables namely self-efficacy variables and work motivation variables on dependent / dependent variables, i.e. lecturer work. The addition of the word effectiveness in front of the verb in the title of the study "The Effect of Self-Efficacy and Work Motivation on the Work EFFECTIVENESS of Indonesian Aviation College Lecturers" is intended to explain that the work of lecturer performance will be effective if self-efficacy and work motivation increase or vice versa.

**A framework of thinking.** Thinking framework is a research paradigm that explains how researchers view the facts of social life and researchers' treatment of science or theory. The thinking framework also explains how researchers understand a problem, as well as testing criteria as a basis for answering research problems (Willy and Jogiyanto, 2015). The relationship between self-efficacy and work motivation to the work effectiveness of STPI lecturers can be simply stated as a linear functional relationship. Variable X and variable Y or  $Y = f(X)$ . Where X in this case self-efficacy (X1) and work motivation (X2) as an independent variable is called input, and Y is the effectiveness of lecturer work as a dependent variable, called output. Lecturer work effectiveness will increase if self-efficacy and work motivation of lecturers support it or increase. So the framework of thinking or research paradigm can be described as follows:

**Figure 1.** Research Model



**Research Hypothesis.** The researcher (Sugiyono, 2014) stated that the hypothesis is a temporary answer to the formulation of research problems, where the formulation of the problem is expressed in the form of sentence statements. The hypothesis always takes the form of a sentence statement and relates in general or specifically - one variable with another variable, stated as follows:

Ho:  $p = 0$  = self-efficacy does not affect work effectiveness.

Ha:  $p \neq 0$  = self-efficacy affects work effectiveness.

Ho:  $p = 0$  = work motivation has no effect on effectiveness.

Ha:  $p \neq 0$  = work motivation influences work effectiveness.

So the temporary answer is that it is suspected that there is an effect of self-efficacy and work motivation on the effectiveness of lecturers' work at the STPI

Another thing, according to (Abdilah and Jogiyanto, 2015), a hypothesis is a predictive statement about the relationship between variables. The hypothesis specifically mentions predictions about the relationship between these variables. The format of the hypothesis can be arranged in a question or statement format. The following hypothetical format is the question: Are There Effects of Self-Efficacy and Work Motivation on the Effectiveness of Lecturer Work in College of Indonesia Aviation or Sekolah Tinggi Penerbangan Indonesia?

**Effect of Director's Efficacy on Work Effectiveness.** In a study from (Lau, 2012) conducted at the university in the United States using 224 lecturers showed that self-efficacy was positively related to Work Effectiveness. The higher the efficacy of a person the higher the effectiveness of one's work. This proved that the Self-Efficacy possessed by a lecturer gives a boost to Work Effectiveness. Because they assume that basically, every person must have Self-Efficacy, but the self-efficacy is formed because of support from universities. According to (Lodjo, 2013), in his study of 127 employees of PT. PLN Suluttenggo mentioned that self-confidence is very important. The more capable and confident a person is in carrying out their duties, the higher the effectiveness of the employee's work. Based on previous research it can be concluded that:

**H1:** Self-efficacy has a positive and significant effect on work effectiveness.

**Effect of Work Motivation on Work Effectiveness.** Kartika and Kaihatu (2010) in their study of 72 employees of the Pakuwon Food Festival stated that work motivation has a significant effect on employee job satisfaction. In addition to research conducted by Brahmasari and Suprayetno (2008) in their study of 1,737 employees at PT. Pei Hai International Wiratama Indonesia in Surabaya and Jombang stated that work motivation has a positive effect on employee work effectiveness. Another study conducted by Djamaludin (2009) of 200 civil servants in the city of Maba stated that work motivation has a positive effect on work effectiveness. Based on previous research, it can be concluded that:

**H2:** Work motivation has a positive and significant effect on Work Effectiveness.



## METHODOLOGY

Research Approach. According to (Rodi, 2013), it is how to review, see, treat or approach the research problem whether it will be of a nature to explore, reveal all aspects including exploring something, determining cause and effect, comparing, connecting, making improvements and improvements ". Furthermore, according to (Mukrodi, 2018), the research approach is divided into two, quantitative research and qualitative research. Based on this opinion the type of research used is quantitative research, where this research produces data in the form of numbers and processing using statistical analysis. According to (Achjari and Abdillah, 2015), quantitative research emphasizes the test theory through the measurement of research variables using statistical procedures. This type of research is correlation research, as according to (Zulfiani *et al.*, 2015); (Santoso *et al.*, 2013), "correlation research aimed to determine the pattern and closeness of the relationship between two or more variables". This research was conducted to find out how the relationship between the influence of the independent variable Self-Efficacy (X1) and Work Motivation (X2) to the dependent variable lecturer work effectiveness (Y) and which aspects of self-efficacy and work motivation are more influential.

The research subjects were 30 lecturers at the Sekolah Tinggi Penerbangan Curug or College of Indonesia Aviation Curug, in Tangerang. The subjects consisted of 10 Department of Aviation Management lecturers. The Aviation Engineering Department has 10 people and the Aviation Safety Department has 10 people. Data measurement techniques using a questionnaire. The Self-efficacy variable was measured by 35 question items, the variable of lecturer performance measured by the research and productivity contract consisted of 26 question items.

**Data analysis.** According to (Santoso *et al.*, 2013); (Gozali, 2013). Data analysis was performed using the Partial Least Square (PLS) approach with Smart PLS version 2. The initial step in the PLS model was to make a path analysis. Path analysis in PLS explains the relationship between latent variables in the inner model and the relationship between latent variables and indicators in the outer model. After estimating the PLS model, the next step is to evaluate how well the measurement model and then the structural model evaluation.

**Evaluate the measurement model (outer model) using the reflective approach.** Evaluation of the reflective model consists of: (1) Convergent Validity describes the correlation between the construct and the indicator. The greater the correlation the better. Reflective size is said to be high if it correlates more than 0.70 with the contract that is to be measured. However, for the initial stage of research, the development of a measurement scale of 0.5 to 0.6 loading values is considered sufficient. (2) Composite Reliability illustrates the consistency of questions in the instrument. Composite Reliability of the indicator block shows a satisfactory value if it has > 0.7. (3) Discriminant validity is comparing the square root value of Average Variance Extracted (AVE) for each contract with the correlation between other constructs in the model. If the AVE root value of each contract is greater than the correlation value between the contract and the other contracts in the model, then it is said to have a good discriminant validity value. This measurement can be used to measure the reliability of component scores of latent variables.

Researcher (Gozali, 2013) indicated that after evaluating the outer model, the next step is the Evaluation of the Inner Model. Testing the inner model or structural model is done to see the relationship between variables, significance values and the R-square of the research model. The assessment of the model with PLS starts with looking at the R-square for each latent dependent variable. Changes in the value of R-square can be used to assess the effect of certain latent independence variables on the dependent latent variable whether it has a substantive effect (Samsiah, 2018).

**Probability Sampling Procedure.** According to (Abdillah, 2016), the probability sampling procedure explains that the researcher chooses or takes a sample from a population whose information is known, namely the sampling frame. The selection of random samples gives equal opportunity to all units/entities in a population selected as research samples. Data collection was carried out in a random sample by conducting a questionnaire. The main advantage of random sampling techniques is that accuracy and precision can be achieved so that research results can be generalized. Questionnaire or questionnaire is done by distributing questionnaires/questionnaires to respondents to collect data by asking each lecturer to answer every question listed in the questionnaire given while observing by making direct observations on all STPI lecturers.

**Independent Variable.** Independent variables or predictors or antecedents which in certain cases are referred to as covariates or factors (Abdillah, 2016). The independent variable in this study is Self-Efficacy. Efficacy plays a very important role in daily life, a person will be able to use his potential optimally if his efficacy supports it. Self-efficacy also has a very big role in the effectiveness of lecturer performance. The indicators to be examined are (1) Efforts to complete the work; (2) There are efforts to achieve success; (3) Perseverance in completing work; (4) Efforts to change themselves based on experience.

**Dependent Variable.** The dependent variable is "the variable that is assumed to measure or assess the effect of the independent variable. The dependent variable is also called the variables or criterion "(Abdillah 2016). The dependent variable in this study is Performance (Performance Effectiveness). The performance of a lecturer here is the result of the work of a lecturer while he is working in carrying out the main duties of his position which can be used as a basis for whether the lecturer can be said to have good work performance or vice versa. Indicators or aspects to be examined are (1) Pedagogical competence. (2) Professional competence. (3) Personality competence. (4) social competence.

**Data Collection Techniques.** A study to have accurate data requires the right data collection techniques. According to Rodi (2013), data collection techniques can be done by interview, questionnaire, observation, and a combination of the three. Data collection techniques that will be used in this study is to use a questionnaire with a closed questionnaire. According to (Abdillah, 2015), a closed questionnaire is a "questionnaire that is presented in such a way that respondents are asked to choose an answer that matches their characteristics by giving a cross (X) or a checklist.

**Measurement method.** The measurement method is a measuring device used a Likert scale that is modified into 5 alternative answers. Here is the weighting of alternative answers on the Likert scale.

**Table 1.** Alternative Score of Self-Efficiency

Answering Alternatives	Score
Always	5
Often	4
Sometimes	3
Rarely	2
Never	1

(Processed data, 2019)

**Table 2.** Alternative Scores for Performance

Answering Alternatives	Score
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1

(Processed data, 2019)

**Table 3.** Alternative Scores of Lecturer Performance

Answering Alternatives	Score
Very Good/ Very High	5
Good/ High	4
Neutral	3
Worse/ Low	2
Worst/ Very Low	1

(Processed data, 2019)

**Instrument Test.** As mentioned above, the data collection tool or the instrument used is a questionnaire. Before being used in real research, this questionnaire must be tested first so that the data obtained is valid and reliable.

**Validity test.** According to (Abdillah, 2016); (Santoso *et al.*, 2013), "validity is the main criterion for the research". Validity is a measure that shows the levels of validity or validity of an instrument (Rodi, 2013). Validity is the accuracy of the data that occurs in the object of data research that can be reported by researchers. Based on the above opinion, the core validity of the instrument is stated to be valid if the instrument can measure what is to be measured and under what is happening in the field. According to (Rodi, 2013), if the correlation  $r$ -count is positive or is greater than  $r$ -table, then the instrument referred to is valid, whereas if  $r$ -count is smaller than  $r$ -table then it is to be invalid.

### Test Requirements Analysis.

**Validity Analysis.** A validity test is used to measure whether a questionnaire is valid or not. A questionnaire is stated to be valid if the questions in the questionnaire can reveal something that will be measured by the questionnaire (Ghozali, 2013). According to (Malhotra, 2012), validity is the extent to which differences in observed scale values reflect differences between objects with measured characteristics, compared with systematic or random errors. This shows that to know the validity three methods are needed:

**Convergent Validity.** According to (Ghozali, 2013) convergent validity is used to measure in determining whether each indicator is estimated to validly measure the dimensions of the concept being measured. The reflexive size of an individual is to be high if it correlates more than 0.70 to the construct that is to be measured.

**Discriminant Validity.** According to (Ghozali, 2013), discriminant validity is carried out in two stages, by regarding the value of cross loading factor and comparing the roots of AVE (Average Variance Extracted) with correlations between constructs or latent variables. The cross-loading factor is to find out whether the latent variable has adequate discriminant that is by comparing the correlation of indicators with the latent variable must be greater than the correlation between variables with other latent variables. If the correlation of variables with latent variables has a higher value than the correlation of these variables with other latent variables, it is stated that the latent variables have high discriminant validity.

**Average Variance Extracted.** According to (Ghozali, 2013), another method for evaluating discriminant validity is to compare the square root value of Average Variance Extracted (AVE) of each construct to the correlation among other constructs in the model. If the root value of the Average Variance Extracted (AVE) of each construct is greater than the correlation value between the construct and other constructs in the model, then it is said to have a good discriminant validity value. It is recommended the AVE value should be greater than 0.50 and it is stated that the indicator is valid.

**Reliability Analysis.** A reliable instrument is an instrument that can provide relatively the same measurement result if the instrument is used to measure the same variable at two or more different times in more or less the same circumstances (Aritonang, 2007). According to (Malhotra, 2012), reliability is an instrument that can provide (relatively) the same measurement of result when the instrument is used to measure the same variable at two or more different times under less equal conditions. The instrument reliability test uses the composite reliability value and Cronbach's Alpha. An instrument is declared reliable when the Cronbach's Alpha value > 0.7. The reliability test in this study uses Composite Reliability and Cronbach's Alpha.

**Hypothesis testing.** In this study, the hypothesis will be tested using simple regression methods, because simple regression is to estimate and predict the population average or the average value of the dependent variable based on the known independent variable values. The hypothesis in this study is H0: There is no positive and significant relationship between self-efficacy and the performance of lecturers at the College of Indonesia Aviation or

Sekolah Tinggi Penerbangan, (STPI) Curug Tangerang. Ha: There is a positive and significant relationship between self-efficacy and lecturer performance at the STPI Curug, Tangerang. To analyze these hypotheses, it is assisted by using Smart PLS.

## RESULT ANALYSIS AND DISCUSSION

**The result of the questionnaire processing Self-efficacy Variables (X1).** Data from self-efficacy variable (X) obtained through questionnaires to 30 respondents is explained through the percentage of the result of answers to 35 questions about self-efficacy, the answers obtained are then analyzed using the answer percentage method, the result of which is self-efficacy for lecturers in College of Indonesia Aviation or STPI good enough. This can be shown from the result of the answers and the total percentage of answers always are 39.81%. Answers often are 42.88%, answers sometimes are 8.65%, answers rarely are 5.38%, and answers never are 3.30%. Hence the self-effectiveness (X) of STPI Lecturers is good/ frequent.

**The result of processing the Variable Motivation questionnaire (X2).** The result of motivation variable data (X2) obtained through questionnaires to 30 respondents are explained through the percentage of answers to 12 questions about motivation, the answers obtained are then analyzed using the answer percentage method, which results that the motivation of lecturers in STPI is good enough. This can be shown from the result of the answers and the total percentage of answers namely answer Strongly Agree is 23%. Answers Agree is 46.7%, Neutral answers are 23.3%, answers Disagree is 3.3%, and Strongly Disagree answers is 3.3%. Thus the Motivation (X2) of the STPI Curug is already high.

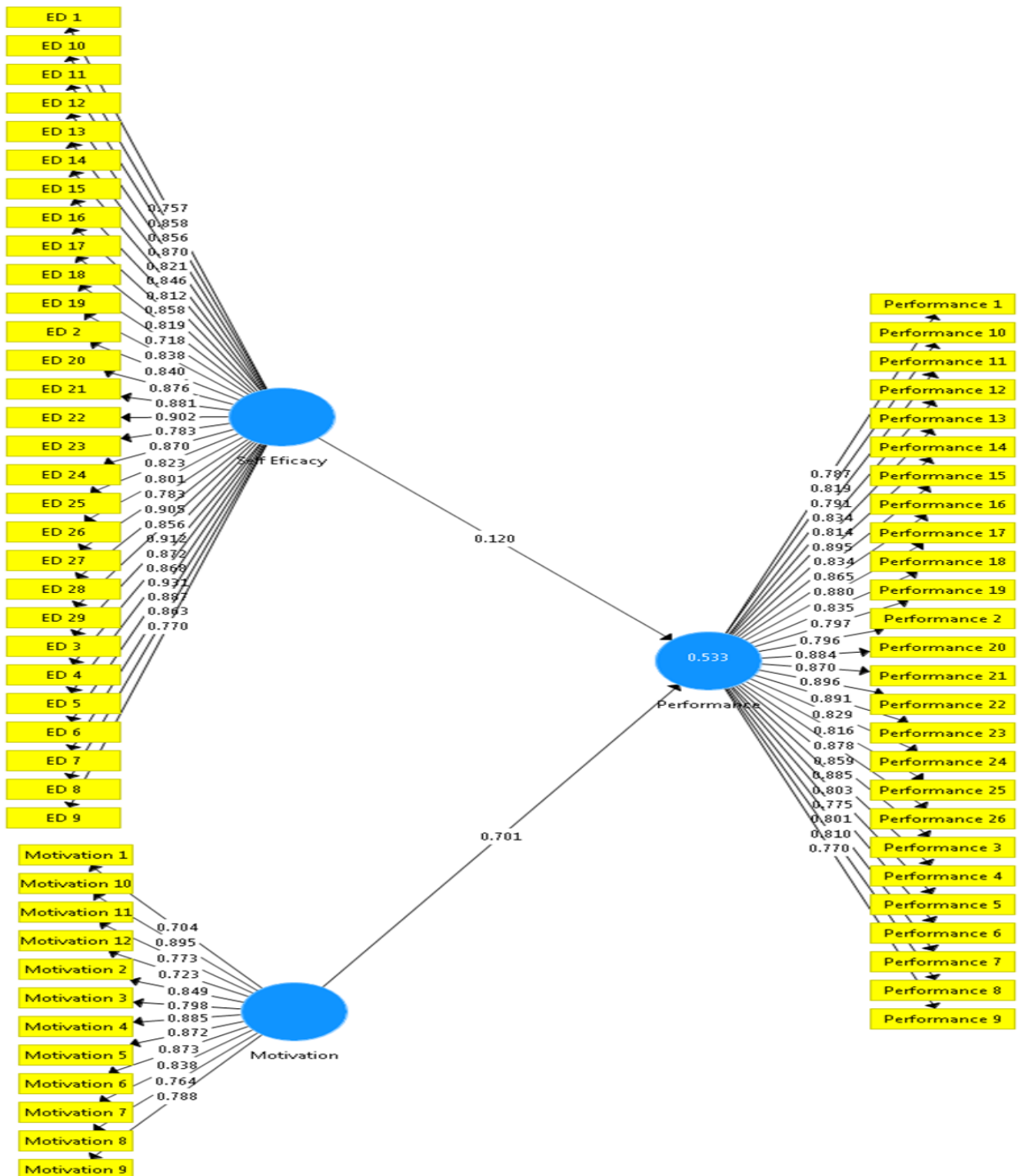
**Result of processing lecturer performance questionnaire.** Data on the result of Lecturer Performance (Y) obtained through questionnaires to 30 respondents is explained through the percentage of answers to 26 questions about Lecturer Performance. The answers obtained are analyzed using the answer percentage method, the result of which showed that the lecturer's performance is good enough shown from the answers respondents where all respondents, numbering to 30 people, who answered "very good/ very high" is 18.08%, answers "good/ high" is 68.77%, answers "enough/ normal" is 12.88%, answers "Not good/ low" is 0.77%. Thus the performance of lecturers in STPI is good enough.

### Validity test

**Convergent Validity.** Based on the research from (Ghozali, 2013), convergent validity is used to measure in determining whether each indicator is estimated to validly measure the dimensions of the concept being measured. The reflexive size of an individual is said to be high if it correlates more than 0.70 to the construct that is to be measured. Following is the Smart-PLS output to test validity:



Figure 2. Result of Factor Loading



Based on figure 2 above, all statement items have a loading factor of more than 0.7 so that all statement items are convergent valid. It can be concluded that the 35 items of self-

efficacy statements are valid and 12 motivational questions are also valid. Likewise in the 26 point statement of lecturer performance is also valid.

**Average Variance Extracted**

Following is the AVE value in table 4:

**Table 4.** Average Variance Extracted

	<b>Avarage Variance Extracted</b>
Self-Efficacy	0,715
Motivation	0,665
Performance	0,699

(Processed data, 2019)

Table 4 showed the AVE value above 0.5 for all constructs contained in the research model. The result of all validity tests in the outer model by assessing convergent validity, discriminant validity, and AVE values indicate that all indicators are valid

**Reliability Test.** Besides the validity test on each instrument, the researcher also conducted a reliability test. An instrument is carried out reliably if the reliability value is greater than the r-table, as follows:

**Table 5.** Result of Reliability Test

	<b>Composite Reliability</b>	<b>Cronbach's Alpha</b>
Self-Efficacy	0,986	0,987
Motivation	0,960	0,954
Performance	0,984	0,983

(Processed data, 2019)

Because the r-score is positive and is greater than r-table (above 0.6), Cronbach's Alpha: 0.987 (self-efficacy), 0.954 (Motivation) and 0.983 (lecturer performance), all items of statement of self-efficacy variables ( X1), motivation (X2) and lecturer performance variable (Y) are reliable.

**Table 6.** Result of Hypothesis Test

	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Std. Dev. (STDEV)</b>	<b>t. Statistics (JO/STDEV)</b>	<b>P- Value</b>
Self-Efficacy → Performance effectiveness	0.120	0.122	0.143	3.837	0.002

Motivation → Performance effectiveness	0.701	0.711	0.201	3.480	0.001
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(Processed data, 2019)

Hypothesis test in this study was conducted by showing at the t-Statistics value and the P-Values . The research hypothesis can be accepted if the t-statistic value is greater than 1.96 and the P-Values value <0.05. The following are the results of hypothesis testing obtained in this study: (1) Test the effect of self-efficacy on the effectiveness of H1 performance: There is an effect of self-efficacy on the effectiveness of performance.

Based on the result of the test self-efficacy variables on the effectiveness of performance, it can be concluded that H1 was not rejected because self-efficacy has a t-statistic value of 3.837 and a p-value of 0.002. These statistics are greater than the criteria value limit of 1.96 and the p-values are smaller than 0.05 or 5%. So it can be stated that there is a positive and significant effect between self-efficacy and performance on STPI lecturers. (2) Test the effect of motivation on performance effectiveness. H2: There is a motivational effect on the effectiveness of performance.

Based on the result of the test work motivation variables on the effectiveness of performance, it can be concluded that H2 is not rejected because motivation has a t-statistic value of 3,480 and a p-value of 0,001. These statistics are greater than the criteria value limit of 1.96 and the p-values are smaller than 0.05 or 5%. So it can be said that there is a positive and significant effect between motivation and performance on STPI lecturers.

R-Square Test. Based on the data processing that has been done, the R-Square value is obtained as follows:

**Table 7.** Variables of R-Square Value

	R-Square Value
Performance	0,533

(Processed data, 2019)

Based on the data presented in table 6 above, it can be shown that the R-Square value for the variable job satisfaction is 0.533. The acquisition of this value explained that the percentage of the amount of performance can be explained by self-efficacy of 53.3%. While the remaining 46.7% is influenced by other factors.

**Research Limitations.** In preparing this study, researchers tried to do this research carefully and thoroughly, but researchers are aware that this study also has limitations. Limitations in this study include the following: (1) The factors which influence the performance of the lecturers studied in this study are only the lecturers' self-efficacy. Other factors are not examined, so this study can only provide information on the effect of the self-efficacy of STPI lecturers on STPI lecturer performance. (2) Of course, the research subjects are only from STPI Curug, Tangerang, research generalizations only apply to STPI. (3) Researchers do not consider the length of service, education, and background of a lecturer in conducting teaching and learning activities at STPI (4) many other variables affect the performance of lecturers besides self-efficacy that are not examined in this study.

## CONCLUSION

From the description above, the overall research result showed that there is a significant relationship between self-efficacy and lecturer performance at STPI. If the lecturer has a high level of efficacy, he/she is always confident in his ability to do a thing, while a lecturer with a low level of self-efficacy he/she will always hesitate and half in completing his assignment. If the efficacy variable increases, the lecturer's performance effectiveness variable tends to increase, meaning that the higher the self-efficacy score, the higher the lecturer performance. Likewise, if the lecturer has a high motivation, then the variable effectiveness of lecturer performance tends to increase, meaning that the higher the motivation score, the higher the lecturer performance.

The implications of the result of this study include two things, namely theoretical implications and managerial implications. The theoretical implications are related to their contribution to the development of educational theories about self-efficacy, motivation and lecturer performance, while the managerial implications are related to the research contributes to improving the performance of STPI lecturers.

Managerial Implications, give effect to STPI's management policies or/and relevant stakeholders to and must: provide an opportunity for STPI lecturers to develop Higher Education Tri Dharma capabilities (teaching, researching and community service) through various assessments and awards (doing an outstanding work or self- development) with the assistance and facilitation of the leadership/management of STPI or/and the government.

**Suggestion.** Apart from the limitations possessed by the researcher, there are some suggestions that researchers want to convey, including (1) Self-efficacy contributes positively to the effectiveness of STPI lecturers' performance. Therefore lecturers' self-efficacy needs to be improved continuously. For this reason, lecturers need to improve the knowledge and skills required/ required, both on their initiative and the leadership/ management initiative, through various assessments (for example information technology training and training held by domestic and foreign institutions. (2) For STPI leaders/ management and related parties in providing assistance, guidance and coaching it is necessary to pay attention to qualitative lecturers, besides that competition lecturers need to be properly and properly managed to prevent discrimination and injustice.

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